

Electronic Systems Center

**Directorate of
International Programs**

**Center of Choice for
International C4I**

OVERVIEW

- ◆ Who We Are
- ◆ What We Do
- ◆ How We Do It
- ◆ How Do We Get Started

MISSION

SAF/IA

“To create, advocate and facilitate all policies and programs that support US national security directives through international politico-military affairs, foreign military sales, education and training, cooperative research and development, and related endeavors, in concert with US government and industry partners.”

ESC

“We work in partnership with our customers and suppliers to research, develop, field and sustain timely, affordable, interoperable, C4I solutions which enable our customers to achieve victory at any level of conflict.”

ESC/ IA

“To Plan, Execute and Support International Programs That Satisfy Customer Requirements and Support United States National Security Policy”

ESC's International Management Commitment

DSAA

ELECTRONIC SYSTEMS CENTER
Lt Gen R. T. Kadish

SAF/IA

ESC/IA

AWACS

JTIDS

Comm &
Airspace
Management

Surveillance
& Control

Mission
Planning

Command
& Control

ESC/IA ORGANIZATION

DIRECTOR
COL EDWARD WATTS, JR.
DEPUTY DIRECTOR
EDWARD KALAPINSKI

IAA
MGMT OPERATIONS
DIVISION
JEAN WRIGHT

IAK
CONTRACTS
DIVISION
PETE IZZO

IAM
MULTI-NATIONAL
PROGRAMS DIV
VACANT

IAO
OPERATIONS
DIVISION
LTC RAY LEVIAS

IAR
REQ & ENGINEERING
DIVISION

LTC RAY LEVIAS

IAT
TECH SUPPORT
DIVISION

WILLIAM FAHY

IAX
PROGRAM CONTROL &
FMS FINANCIAL
MGMT DIVISION
HUGH MCNEIL

ESC'S C4I INTERNATIONAL ACQUISITION PHILOSOPHY

- ◆ **COMPREHEND CUSTOMER NEEDS,
REQUIREMENTS AND EXPECTATIONS**
- ◆ **TAILOR THE PROGRAM TO FIT CUSTOMER
COST, TECHNICAL AND SCHEDULE
RESTRICTIONS**
- ◆ **OPENLY COMMUNICATE WITH THE CUSTOMER
AND INDUSTRY**

ESC/IA C⁴I

PROJECTS WORLDWIDE

<u>Period</u>	<u>System</u>
1961-1964	412L (Germany)
1962-1967	NADGE (NATO)
1964-1969	BADGE (Japan)
1971-1988	Combat Grande (SADA) (Spain)
1974-1979	IADS (Iran)
1979-1981	CCIS (Greece)
1976-1983	JSS (Canada)
1978-Present	AWACS (NATO)
1979-Present	BADGE-X (Japan)
1979-Present	RSAF C ³ (Saudi Arabia)
1981-Present	AWACS (Saudi Arabia)
1982-Present	NADS (NATO)
1983-Present	ACCS (NATO)
1983-Present	Thailand
1984-1988	HAVE RONDO (Sudan)

ESC/IA C⁴I

PROJECTS WORLDWIDE

(CONCLUDED)

<u>Period</u>	<u>System</u>
1984-1986	Peace Cube (Somalia)
1986-1992	E-2C/776 (Egypt)
1986-1987	TADMP (Turkey)
1987-1988	AOC/JOC (Bahrain)
1987-1992	TRC-170 Communications (UAE)
1990-Present	Peace Panorama (Colombia)
1993-Present	Egyptian GATR
1993-Present	Peace Pannon (Hungary)
1993-Present	Japan AWACS
1993-Present	NCCS (Japan C ³ I)
1994-Present	Regional Airspace Initiative (Central Europe)
1995-Present	Military NAVAIDS (Hungary)
1995-Present	C ⁴ I Architecture (Czech Republic)
1995-Present	Air Sovereignty Operations Center (ASOC) (Central Europe)

CURRENT PROJECTS

PROJECT TITLE	COUNTRY
IFF	EYGPT
EMISS	EYGPT
GRC-171 RADIOS	KOREA
ASOC	POLAND, ROMANIA, CZECH REPUBLIC, SLOVAKIA
BADGE	JAPAN
FRIGATE PATROL	CANADA
TARAS	SWEDEN
RAI STUDY	AUSTRIA
NCCS	JAPAN
GATR	EYGPT
HF SCRAMBLER	EYGPT

CURRENT ESC ICR&D PROGRAMS

- ◆ **1997 NATO COOPERATIVE R&D (NUNN) PROGRAM**
 - **EXPERIMENTAL AIR OPERATIONS CENTER, \$2.9M**
 - **JOINT SURVEILLANCE SYSTEMS MODERNIZATION PROGRAM, \$1.5M**
- ◆ **1997 FOREIGN COMPARATIVE TESTING (FCT) PROGRAM**
 - **RENAISSANCE VIEW, \$1.5M**
 - **MILSTAR TRAVELING WAVE TUBE, \$0.921M**
- ◆ **1997 ENGINEER AND SCIENTIST EXCHANGE PROGRAM (ESEP), PLACED TWO GERMAN ENGINEERS**
- ◆ **OTHERS: VARIOUS MOUs/MOAs, DEAs/IEAs, SUPPORT USAF PARTICIPATION IN INTERNATIONAL FORUMS, HOST INTERNATIONAL VISITORS AND INTERNATIONAL DAYS AT ESC**

International Programs Process

Concept

Letter of
Request

P&A
Development

Letter of Offer
& Acceptance

Requirements Definition Phase

Pre-LOA Phase

Surcharge Funded

Program, System
and Specification
Definition

Solicitation
and Contract
Award

System Planning,
Design,
Fabrication and
Delivery

System
Installation
and Check-
out

Sustainment

Program Execution

Post LOA Phase

Direct Case Funded

- ◆ Process “custom fit” for each country and requirement
- ◆ Each program “different” based on customer requirements

Contract
Close-Out

FMS Case
Reconciliation and
Close-Out

Program Close-Out

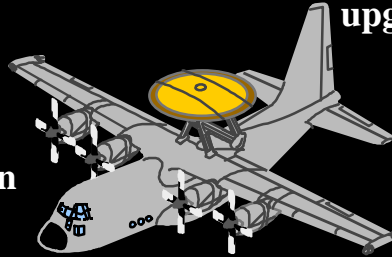
Post LOA Phase

Surcharge/Direct Case Funded

C-130 Airborne Early Warning & Control

System Description

- ◆ Provide affordable multi-role, highly deployable, airborne surveillance, C3 & battle management asset for international customers
- ◆ Provide continuous 360 degree long range radar, IFF & ESM coverage over land, water & mixed environments
- ◆ Capable of sustaining 13+ hours on-station times for a mission 200nm from base at an altitude of 28,000-30,000 feet
- ◆ Interoperate with USAF, NATO & Coalition forces
- ◆ Utilize existing country logistics, training, and maintenance infrastructure



Program Issues

- ◆ No projected USAF user
- ◆ Non-production system (inherent risk)
 - ◆ Unofficial SPO/Contractor relationship
- ◆ Lockheed-Martin/Northrop-Grumman teaming
- ◆ Budgetary constraints (P&A prep/NC-130V upgrade)

Rough Order of Magnitude

\$450 Million

- ◆ Based on four (4) C-130 E/H/J models (GFE)
- ◆ APS-145 Radar
- ◆ Nine (9) mission console containerized capsule with crew rest area

Projected Schedule

- ◆ 72 months from LOA signature through four a/c delivery to completion of two years tech support
- ◆ First A/C delivery 34 months after LOA sign (competitive - 22 months if directed source)

Forecasted SPO Size

Organic	8
MITRE	11 STE
TEMS	6
TOTAL	25

Build it Well And The Customer Will Come

Oberammergau Conference - May 92

Peace Pannon - Jun 92

Prague Summit - Jan 94

Regional Airspace Initiative(RAI) Jun 94- Czech Rep, Hungary, Poland, & Slovakia

C⁴I - Czech Republic - Jun 95

ASOC - Air Sovereignty Operations Center

RAI - Feb Sep 95 - Albania, Romania & Slovenia

RAI - Sep 96 Estonia, Latvia & Lithuania

Office of the Secretary of Defense - Jan 97 future RAI & C⁴I initiatives

Key is ESC customer focus and command & control excellence

- ◆ **Link customer needs with available C² capability**
- ◆ **Security Assistance and acquisition policy, resources, and program execution to achieve C² coalition warfare capability**

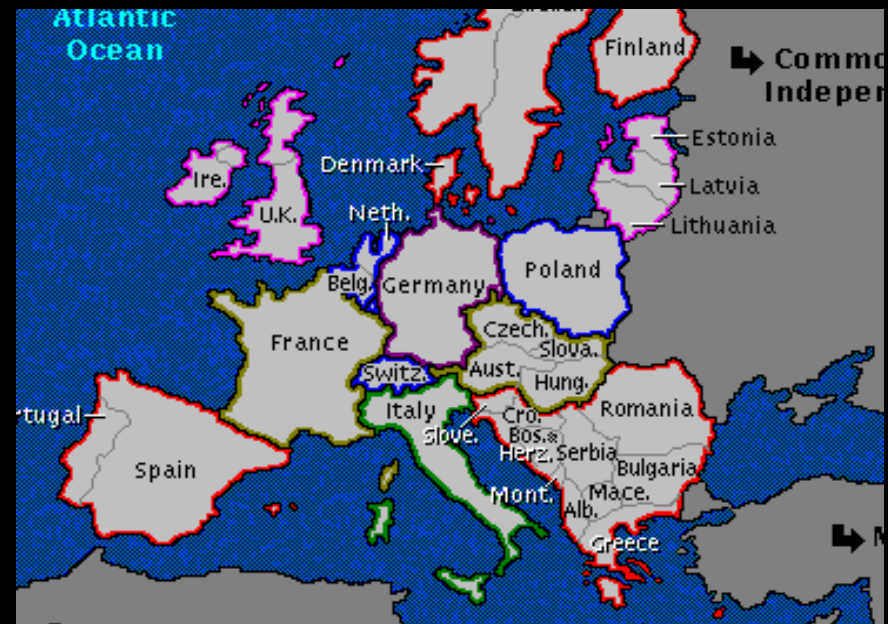
PEACE PANORAMA - COLOMBIA

- ◆ Integrated air surveillance system for Colombian military
 - Incorporates radar data into national military command center information
 - Improves control of Colombian airspace and identification of airborne targets



REGIONAL AIRSPACE INITIATIVE (RAI) CENTRAL & EASTERN EUROPE

- ◆ Involves Hungary, Poland, Czech Republic and Slovakia
- ◆ Define architectures for modernization of ATC/Air Sovereignty systems
- ◆ Leverage existing host nation assets
- ◆ Recommend a phased implementation plan
- ◆ Goal: facilitate eventual integration with NATO via technical compatibility



NEW CENTRAL COMMAND SYSTEM (NCCS) - JAPAN

- ◆ Japanese Defense Agency (JDA) central C3I system comprised of New Central Command Post (NCCP) with multiple voice and data links

BASE AIR DEFENSE GROUND ENVIRONMENT (BADGE) - JAPAN

- ◆ Automated air defense network of command and control centers, surveillance radars, and communication sites



PEACE PANNON - HUNGARY

- ◆ IFF/SIF system for Hungarian Home Self Defense Force
 - ICAO compatible
 - Four ground interrogator sites (Peace Pannon)
 - 113 air transponders (Peace Alba)
 - WR-ALC responsibility



HIGH POWER AMPLIFIER (HPA) LABORATORY EQUIPMENT - EGYPT

- ◆ Provide test equipment, spares and technical assistance in support of HPA maintenance and repair laboratory

HF SCRAMBLERS - EGYPT

- ◆ Full duplex high frequency voice security equipment for Egyptian signal corps

GROUND/AIR TRANSMIT/RECEIVE (GATR) SHELTERS - EGYPT

- ◆ Seven GATR Centers
 - Two shelters per center
 - Each with 4 UHF/VHF transceiver sets
 - Each shelter interfaces with three existing C3 systems



MSS II+ - MISSION PLANNING SYSTEM - EGYPT

- ◆ F-16 Mission planning systems
 - Database preparation system

IFF TECH SUPPORT - EGYPT

- ◆ Acquisition planning for DCC